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July 22, 1987

TO: File

FROM: Frank Jensen, Soils Reclamation Specialist *Frank Jensen*

RE: Chevron Resources Company, Vernal Phosphate Operation,
M/047/007

On May 19, 1987, Bruce E. Gilbert of Chevron and I ran five vegetation transects on areas that had been revegetated three to four years on the phosphate mined areas.

According to the files, the premining ground cover was 18 percent under the Utah juniper type and 26 percent under the sagebrush-grass type. Agreement had been reached to average the two for a 22 percent ground cover figure. To achieve bond release, 70 percent of the premining ground cover, i.e., 15 percent ground cover, needs to be reestablished.

All of the areas that have been reseeded the required three years exceed this requirement. Vegetation ground cover averaged 31 percent on the five transects we ran. Thus Chevron Resources is eligible for full bond release on 270.5 acres. They are also eligible for partial bond release on 127 acres that have been reseeded but have not had three years to become fully established.

Mr. Gilbert submitted a map on July 16, 1987, showing the status of reclamation. It is as follows:

- | | | |
|----|----------------------------------|-------------|
| 1. | Pre 1975 (mostly reclaimed) | 251.0 acres |
| 2. | Previously released | 21.0 acres |
| 3. | Proposed for full release now | 270.5 acres |
| 4. | Proposed for partial release now | 127.0 acres |

I concur with this request, and recommend 270.5 additional acres be fully released from bond and 127 acres be partially released.

A summary of the transects is attached.

clj
cc: L. Braxton
Chevron Resources
1212R/3



Chevron Resources - Vernal Phosphate Mine



Transect #1 - Reclaimed area - May 12, 1987 - Bruce E. Gilbert
in photo - Transect ran with 36-inch diameter hoop.

<u>Vegetation</u>	<u>Percent</u>
Int./pub. wheatgrass	5
Bluebunch wheatgrass	5
Western wheatgrass	6
Milkvetch	3
Alfalfa	6
Clover	2
Big sagebrush	<u>Trace</u>
Vegetation ground cover	27
Litter	8
Rock/pavement	10
Bare ground	<u>55</u>
Total	100



Transect #2 - Reclaimed Area - May 12, 1987

<u>Vegetation</u>	<u>Percent</u>
Bluebunch wheatgrass	3
Int./pub. wheatgrass	2
Western wheatgrass	1
Clover	1
Milkvetch	2
Alfalfa	<u>23</u>
Vegetation ground cover	32
Litter	5
Rock/pavement	55
Bare ground	<u>8</u>
Total	100



Transect #3 - Reclaimed Area - May 12, 1987

<u>Vegetation</u>	<u>Percent</u>
Bluebunch wheatgrass	5
Int./pub. wheatgrass	3
Western wheatgrass	2
Alfalfa	19
Milkvetch	<u>10</u>
Vegetation ground cover	39
Litter	18
Rock/pavement	22
Bare ground	<u>21</u>
Total	100

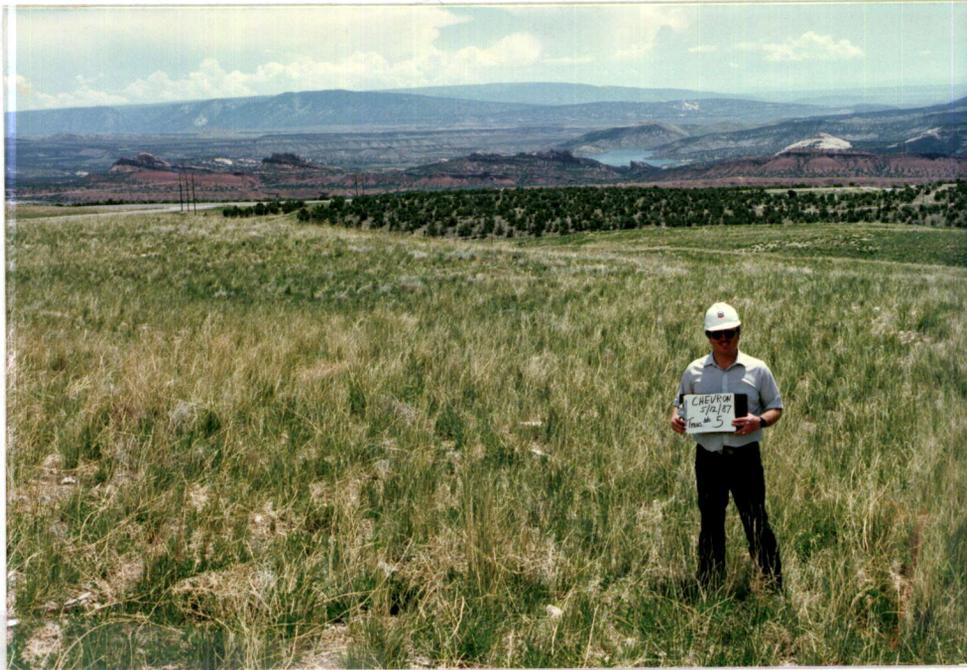
1212R/7



Transect #4 - Reclaimed Area - May 12, 1987

<u>Vegetation</u>	<u>Percent</u>
Int./pub. wheatgrass	15
Alfalfa	10
Milkvetch	<u>2</u>
Vegetation ground cover	27
Litter	1
Rock/pavement	13
Bare ground	<u>59</u>
Total	100

1212R/8



Transect #5 - Reclaimed Area - May 12, 1987

<u>Vegetation</u>	<u>Percent</u>
Int./pub. wheatgrass	12
Bluebunch wheatgrass	1
Indian ricegrass	1
Western wheatgrass	1
Alfalfa	15
Milkvetch	1
Clover	<u>1</u>
Vegetation ground cover	32
Litter	8
Rock/pavement	11
Bare ground	<u>49</u>
Total	100

Summary - The five transects averaged 31 percent ground cover

Recommendation - The following recommendations were discussed with Bruce Gilbert:

1. Try to get some browse on the area, i.e., bitterbrush and fourwing saltbrush.
2. Substitute crested wheatgrass for intermediate/pubescent wheatgrass on the drier sites - it will do better.
3. On the real harsh sites, try some rabbitbrush (white stem).